

Padeswood Portland Cement

CEM I 52,5N

Technical Data Sheet



1. STANDARDS AND CERTIFICATES

Type of Cement	Certificate	Standard	Certificate Number
CEM I 52,5N	CE	BS EN 197-1	1111-CPD-00121

Certificate issued by CPC, 1 Mount Mews, High Street, Hampton, Middlesex, TW12 2SH

2. DECLARED COMPOSITION

	Units	Average Values	Requirements	
			Minimum	Maximum
	Constituents in % of the sum of the principle and secondary constituents			
Clinker ^a	%	95	95	100
Limestone	%	5	0	5
	Additions in % of the cement			
Setting regulator ^b	%	3.0	—	—
Grinding agent ^c	%	≤ 0.01	—	1.0
Reducing agent ^d	%	0.5	—	—

^a Clinker manufactured at Padeswood cement works.

^b Setting regulator is a blend of natural gypsum with up to 25% cemset. Cemset is recycled plaster board.

^c Liquid cement additive that has been specifically formulated to increase the grinding efficiency and flowability of cement. The grinding agent predominantly used is SikaGrind 500.

^d In accordance with the Regulation EC 1907/2006 (REACH), a reducing agent is added to limit the soluble chromium (VI) to a maximum of 2ppm. The reducing agent used is predominantly ferrous sulphate monohydrate.

3. CHEMICAL CHARACTERISTICS

The chemical characteristics are determined in accordance with BS EN 196-2

	Units	Average Values	Requirements	
			Minimum	Maximum
SO ₃	%	3.4	—	4.0
IR	%	0.8	—	5.0
LOI	%	3.8	—	5.0
Cl ⁻	%	0.05	—	0.07 ^e
CR VI ^f	ppm	1.3 ^g	—	2.0
Na ₂ O _{eq.}	%	0.60	—	0.75 ^h

^e 0.07% is an internal product declaration, in the event the running mean of 25 chloride result is expected to exceed 0.07% customers will be notified. The BS EN maximum for chloride is 0.1%.

^f In accordance with the Regulation EC 1907/2006 (REACH), the soluble chromium (VI) content is limited to a maximum of 2ppm. The chromium (VI) content is determined in accordance with EN 196-10.

^g The average value is determined at 4 months to show the chromium (VI) content at the declared maximum shelf life of bulk cement.

^h 0.75% is an internal product declaration and represents the declared mean alkali (DMA) content, in the event the DMA is expected to exceed 0.75% customers will be notified.

4. PHYSICAL CHARACTERISTICS

	Test Method	Units	Average Values	Requirements	
				Minimum	Maximum
Standard consistency	BS EN 196-3	%	29.5	–	–
Initial setting time	BS EN 196-3	minutes	110	45	–
Soundness	BS EN 196-3	mm	0.5	–	10
Specific surface area	BS EN 196-6	m ² /kg	465	–	–

5. MECHANICAL CHARACTERISTICS

The mechanical characteristics^c are determined in accordance with BS EN 196-1.

Compression Strength	Units	Average Values	Requirements	
			Minimum	Maximum
1 Day	MPa	22.0	–	–
2 Day	MPa	34.5	20.0	–
7 Day	MPa	49.0	–	–
28 Day	MPa	60.5	52.5	–

6. PRODUCTION AND DELIVERY

The cement is produced at Hanson Cement's Padeswood works and is produced utilising the two cement mills on site and stored in silos. The cement is despatched by road to customers local to the cement works and by road to Hanson Cement's depot at Llanwern. From Llanwern the cement is despatched by road to customers local to the depot.

7. MANAGEMENT SYSTEMS

The plants management system is certified to ISO 9001.

8. DECLARATION OF PERFORMANCE

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9th March 2011 (the Construction Products Regulation or CPR), a declaration of performance can be accessed from www.hanson.co.uk.

The average values given above represent the previous 12 months production, and are provided as guidelines only. The minimum and maximum requirements are guaranteed limits.

For further information contact:

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